

REMARKS

Favorable reconsideration and allowance of the present application are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1-42¹ are pending in this application, including independent claims 1, 15, and 25. Claims 1, 15, 25, 41, and 42 are being amended in this paper. Independent claim 1, for instance, is directed to a flexible laminate structure comprising a first substrate containing a thermoplastic polymer and a second substrate containing a thermoplastic polymer. At least one of the substrates is substantially impermeable to liquids but substantially permeable to gases. Additionally, each substrate is textured using heat and pressure to form elevations and depressions in each substrate, the depressions being fused together to form fused portions and the elevations forming unfused portions. The unfused portions define pockets containing discrete regions of a functional material, and the functional material is selected from the group consisting of particles, liquids, and combinations thereof. The pockets have an approximate width to height ratio of less than about 10.

In the Office Action, independent claims 1, 15, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 4,892,535 to Bjornberg, et al. in view of U.S. Patent No. 5,411,497 to Tanzer, et al. In a previous Response filed on November 23, 2004, Applicants pointed out in detail how the liquid-impervious back sheet 3 of Bjornberg, et al.'s absorbent pad is *substantially flat* rather than a "textured"

¹ The February 22, 2005 Final Office Action states that Claims 1-39 are pending in the application. However, Applicants filed a Supplemental Amendment for this application on February 7, 2005, adding dependent claims 40-42.

substrate possessing elevations and depressions. The Response to Arguments section of the recent Office Action, however, stated the following:

[I]t is the examiner's position that the base layer taught by Bjornberg et al. would inherently bulge out to some degree creating elevations and depressions in the base layer because the base material is a flexible material and the weight of the particles in the pockets would prevent the base layer from remaining completely flat. . . . Therefore, the rejection is maintained since the base layer will be textured to some degree and will not remain completely flat after being produced.

(Office Action, at 3).

In this paper, Applicants have limited the claims of the application to point out that both substrates are textured *using heat and pressure* to form elevations and depressions in each substrate. (Appl., pp. 21-24). Page 21 of Applicants' specification refers to Figure 4, describing that one or more of the substrates can be textured such that the substrate contains depressions and elevations. (Appl., p. 21, lines 15-19 and Amdt. of June 23, 2004, page 2). According to Figure 4, substrates 12 and 14 are passed under roll 30 that is heated and contains a surface having various protrusions 32. (Appl., p. 23, line 26 – p. 24, line 2). Another heated roll 34 can also be used to facilitate the fusing of substrates 12 and 14, and roll 34 may also have a certain pattern of protrusions. (Appl., p. 24, lines 4-10).

No such flexible laminate structure, wherein both first and second substrates are textured using heat and pressure to form elevations and depressions in each substrate, is taught by Bjornberg, et al. Rather, in Bjornberg, et al.'s absorbent pad, a back sheet 3 is laminated to a cover sheet, wherein pockets are formed in the cover sheet while the back sheet remains substantially flat. Bjornberg, et al. repeatedly explains that its "pockets" are formed in its "cover sheet" 7, **not** in its back sheet 3. (See, e.g., col. 2,

lines 60-62; col. 4, lines 10-13; col. 5, lines 39-56; col. 7, lines 48-52, etc.). For instance, column 2, lines 41-45 of Bjornberg, et al. describe the cover sheet between the channels being of "three-dimensional form having a plurality of spaced pockets therein, in each of which one of the bodies of absorbent material is disposed," not once suggesting that the back sheet 3 has any sort of "three-dimensional form."

Thus, Applicants respectfully submit that Bjornberg, et al. completely fails to disclose or suggest a laminate structure wherein first and second substrates are both textured using heat and pressure to form elevations and depressions in each substrate. Additionally, Bjornberg, et al. completely fails to disclose or suggest a flexible laminate structure wherein at least one of the substrates is substantially impermeable to liquids but substantially permeable to gases. And Tanzer, et al. does not remedy these deficiencies in the disclosure of Bjornberg, et al.

Backsheet 30 of Tanzer, et al. is liquid impermeable and breathable (col. 6, lines 60-68), but it is also the backsheet for the entire diaper 10 and is completely flat. (See, e.g., column 3, lines 64-65 and Figures 2, 4, and 8). Backsheet 30 of Tanzer, et al. is neither textured using heat and pressure to form elevations and depressions in it, nor does it define pockets containing discrete regions of a functional material. Accordingly, Applicants respectfully submit that independent claims 1, 15, and 25 patentably define over the proposed combination of Bjornberg, et al. and Tanzer, et al.

Additionally, in the Office Action, independent claims 1 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,938,650 to Baer, et al. in view of Tanzer, et al. However, both Baer, et al. and Tanzer, et al. completely fail to teach or suggest a flexible laminate structure containing pockets,

wherein those pockets have an approximate width to height ratio of less than about 10 (or between about 1 to about 8). Applicants' pockets may be formed to have relatively small dimensions (e.g., an approximate width to height ratio of less than about 10) regardless of their particular shape to enhance the flexibility of the laminate structure. (Appl., p. 8, lines 18-24; p. 24, lines 24-26). The use of pockets having such relatively small dimensions can allow the resulting laminate structure to remain flexible, even when the pockets contain an inflexible functional material (e.g., activated carbon). (Appl., p. 25, line 28 – p. 26, line 8).

In contrast, neither Baer, et al. nor Tanzer, et al. supplies any dimensions regarding pocket size nor does either reference recognize the flexibility benefits that may be imparted to a laminate structure having pockets according to Applicants' claimed width to height ratios. Accordingly, Applicants respectfully submit that claims 1 and 15 patentably define over the proposed combination of Baer, et al. and Tanzer, et al.

Moreover, independent claims 1 and 15 require that at least one of the substrates is "substantially impermeable to liquids but substantially permeable to gases," and Baer, et al. lacks such a teaching. Nevertheless, Tanzer, et al. was combined with Baer, et al. to reject claims 1 and 15, and the recent Office Action stated the following with regard to this combination:

Tanzer et al. discloses a specific teaching stating that the liquid impermeable layer could also be made from a layer which is liquid impermeable and gas permeable since [this] would allow water vapor to escape from the composite structure. Hence, this teaching correlates to the backsheet of other absorbent structures regardless of the number of layers present in the overall absorbent structure. Therefore, one of ordinary skill in the art would have been motivated to use the breathable, liquid impermeable layer in

Baer et al. to allow moisture to pass through the base layer and the absorbent structure to dry and be more comfortable.

(Office Action, at 5). Applicants respectfully disagree.

Tanzer, et al. does describe one layer of its absorbent article as liquid impermeable and breathable—namely, the liquid impermeable backsheet 30 for the entire diaper 10. (Col. 3, lines 64-65; col. 6, lines 55-68; and Figures 2, 4, and 8). But backsheet 30 is neither textured using heat and pressure to form elevations and depressions in it, nor is it fused to any other substrate to define pockets containing discrete regions of a functional material. Despite these differences between backsheet 30 of Tanzer, et al. and the first and second substrates of Applicants' claims, the Office Action attempts to "substitute" the liquid impermeability/gas permeability of Tanzer, et al.'s backsheet 30 into Baer, et al., even though there is no motivation to do so.

Baer, et al. states that one of the layers of its absorbent core is a nonwoven fabric made from thermoplastic fibers or filaments and that the fabric should be sufficiently porous to allow rapid passage of liquid. (Col. 3). The second outer layer of Baer, et al. may comprise a nonwoven web identical to the first layer, and if the second layer is intended to be the outermost layer of the absorbent core, it may comprise a nonporous continuous film, or a nonwoven fabric laminated to an outwardly facing film. Yet, nothing in Baer, et al. provides any motivation to look to Tanzer, et al. and its liquid impermeable/gas permeable diaper backsheet 30 to make up part of Baer, et al.'s absorbent core. In fact, it appears that the Office Action's proposed combination of Baer, et al. and Tanzer, et al. results improperly from using Applicants' disclosure as a blueprint to reconstruct the claimed invention out of isolated teachings in the prior art.

Thus, Applicants respectfully submit that independent claims 1 and 15 patentably define over the proposed combination of Baer, et al. and Tanzer, et al.

Lastly, in the Office Action, independent claim 25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Baer, et al. and Tanzer, et al., further in view of Bjornberg, et al. Baer, et al. completely fails to disclose certain aspects of the claimed method, for instance, depositing a functional material onto a first substrate in discrete regions, wherein a suctional force is used to facilitate the positioning of the functional material in the discrete regions. Nevertheless, Bjornberg, et al. was combined with Baer, et al. in an attempt to render claim 25 obvious. The Office Actions stated:

Both Baer et al. and Bjornberg et al. disclose similar techniques such as depositing the particles and bonding the layers together. However, Baer et al. doesn't detail how the positioning of the particles is controlled to prevent the particles from dispersing over the entire substrate. Thus one of ordinary skill in the [art] would use other known methods for controlling the location of the particles, such as the method taught by Bjornberg et al., which is using vacuum suction.

(Office Action, at 5). Applicants respectfully disagree.

Baer, et al. does "detail" how its SAP particles are deposited onto its lower layer—namely, the superabsorbent polymer particles are **uniformly** deposited onto the lower layer. (Col. 3, lines 57-62; Fig. 1). In particular, this portion of Baer, et al. describes how the lower web of fabric 12 is moved in one direction and how a quantity of SAP 14 is *uniformly deposited* on the lower layer 12 by powder meter 16. Nothing in Baer, et al. suggests applying particles to a substrate "in discrete regions" wherein a suctional force is used to facilitate the positioning of the functional material in the discrete regions, according to Applicants' claims. In fact, it appears that the proposed combination of Bjornberg, et al. (which includes a vacuum chamber 37 that aids in filling

its pockets with absorbent material) with Baer, et al. is improperly based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention. Thus, Applicants respectfully submit that no teaching or suggestion would have existed at the time the present invention was made for one of ordinary skill in the art to combine teachings from both Bjornberg, et al. and Tanzer, et al. with Baer, et al. and arrive at the method of claim 25. Applicants respectfully submit that independent claim 25 patentably defines over the cited references.

Dependent claims 2-14, 16-24, and 26-39 were also rejected under 35 U.S.C. § 103(a) using the above-cited references. Applicants respectfully submit, however, that at least for the reasons indicated above relating to corresponding independent claims 1, 15, and 25, the dependent claims patentably define over the references cited. However, Applicants also note that the patentability of the dependent claims does not necessarily hinge on the patentability of independent claims 1, 15, and 25. In particular, some or all of the dependent claims may possess features that are independently patentable, regardless of the patentability of claims 1, 15, and 25.

It is believed that the present application is in complete condition for allowance and favorable action, therefore, is respectfully requested. Examiner Befumo is invited and encouraged to telephone the undersigned, however, should any issues remain after consideration of this Amendment.

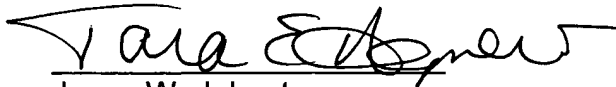
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Respectfully submitted,

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